

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 88-027

UPDATED WASTE DISCHARGE REQUIREMENTS FOR:

CITY OF MOUNTAIN VIEW AND LAIDLAW WASTE SYSTEMS  
SHORELINE REGIONAL PARK  
CLASS III SOLID WASTE DISPOSAL SITE  
MOUNTAIN VIEW, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. The Mountain View Landfill is owned by the City of Mountain View and is currently operated by Laidlaw Waste Systems (hereinafter collectively referred to as the discharger). The City of Mountain View, by application dated December 24, 1986, as amended June 30, 1987, has applied for revision of Waste Discharge Requirements (WDR), including the WDR's for the recently acquired Ferrari site, for the continued operation of the Mountain View Class III landfill in Mountain View, Santa Clara County. The project site, as shown on Attachments A and B, which are incorporated herein and made a part of this Order, is located at the southwestern margin of San Francisco Bay between Charleston Slough and Stevens Creek.
2. The Mountain View Landfill will eventually occupy approximately 735 acres, which includes the entire northern and southwestern portion of the landfill area, 544 acres (hereinafter referred to as the 544-Acre Parcel) which is closed and is now largely developed as a park, including an 18-hole golf course. This park is officially known as Shoreline Regional Park and will eventually encompass the entire property. The remainder of the landfill is occupied by, 1) what is known as the 150-acre parcel (hereinafter referred to as the 150-Acre Parcel), bounded by Stierlin Road, Charleston Road, and Permanente Creek; and 2) a 70-acre tract just east of Stierlin Road and north of Crittenden Road, known as, and hereinafter referred to as, the Ferrari site, acquired by the discharger in 1984. Approximately 115 acres of the 150-Acre Parcel have been developed as a landfill.
3. The Ferrari site was previously owned and operated by the Ferrari Brothers as the Stierlin Road Disposal Site, and is currently regulated by this Board's Order No. 73-51. At the time of acquisition by the discharger, approximately 20 acres of the property had been filled. The remaining permitted landfill area is approximately 30 acres. A 20-acre portion of the site is undeveloped and has not yet been permitted.
4. The 150-Acre and the 544-Acre Parcels of the landfill are currently regulated by this Board's Order No. 78-11, as amended by Order No. 81-26.
5. Both the 150-Acre Parcel and the Ferrari site are currently accepting wastes. The discharger will be placing refuse in the 150-Acre Parcel

intermittently during the next two years, when the concert season at Shoreline Amphitheater is not in progress. After approximately two years, this parcel will be closed and the discharger's intention is to move landfill operations permanently to the Ferrari site.

6. The landfill lies within the northern edge of the San Jose Plain, bounded by commercial salt evaporation ponds on the north, Charleston and Crittenden Roads on the south, and extends from Stevens Creek on the east to near San Antonio Road on the west. The landfill area was primarily low-lying flood plain until filling commenced in 1930. The discharger began operation of a sanitary landfill at the site in 1970. Stream-deposited and Bay mud alluvial materials underlie the site and contiguous areas. Franciscan Formation bedrock underlies the alluvial materials beneath the site at depths exceeding 1,000 feet, and outcrop in the Coast Range several miles to the south and southwest of the site.
7. There are four small clay-lined ponds located at the landfill as part of Shoreline Regional Park. There is no refuse beneath these ponds which are filled with water from the City's supply system. In addition, a 50 acre salt water lake, known as the Small Boat Lake, exists at the northwest corner of the landfill, adjacent to the Coast Casey Forebay. At least two thirds of the lake is surrounded by landfill; however, there is no refuse beneath the lake. Discharge from this lake into San Francisco Bay is regulated by Board Order No. 86-12, NPDES Permit No. CA0038563.
8. The landfill has been constructed primarily by filling of refuse cells excavated to depths of approximately 25 feet below the original ground surface, roughly mean sea level (MSL). The south-western corner of the Ferrari site, an area less than 10 acres, was excavated to a depth of 50 feet below grade in early 1987 for waste disposal. Excavation for waste disposal to this depth was not a part of the original design plan for the Ferrari site, and was in violation of Order No. 73-51. Shallow ground water is present within several feet of ground surface; therefore, perimeter dewatering systems were utilized to control groundwater during excavation. Refuse cells in the 150-Acre Parcel and the Ferrari site are lined with a minimum of 5 feet of compacted clay, and dewatering systems are still in use. Water collected from the 150-Acre Parcel drain system is discharged to Permanente Creek, and water from the Ferrari site drain system is discharged to Stevens Creek. Dewatering systems utilized in the past for other portions of the landfill are no longer in use.
9. The Shoreline Amphitheater has been constructed at the landfill site immediately west of Stierlin Road, east of the 150-Acre Parcel, and adjacent to the 544-Acre Parcel. A subsurface cut-off wall has been constructed around the Amphitheater to reduce the subsurface migration of ground water and leachate into the amphitheater. A dewatering system within the cut-off wall collects any seepage through the wall, and discharges to Permanente Creek.
10. The site is located in a seismically active area approximately midway between the San Andreas and Hayward fault systems. The site lies approximately 12 miles east of the San Andreas fault, 10 miles southwest of the Hayward fault, and 17 miles west of the Calaveras fault. A fault is suspected to underlie the site at a depth of 1,000 feet. The

discharger has indicated that there is no geologic evidence that this fault has offset sediments of Holocene age near the surface.

11. The landfill site is located adjacent to San Francisco Bay on part of the extensive Santa Clara Valley alluvial basin which is composed of unconsolidated Quaternary alluvium deposited by streams draining the surrounding mountain areas. These materials, ranging from Pleistocene to Holocene in age, are composed of clay, silt, sand, and gravel laid down largely as part of a series of coalescing alluvial fans formed by streams. The succession of alluvial fan deposits is interspersed by marine clay deposits near San Francisco Bay. Silty and sandy clays and bay mud predominate in the subsurface section, with randomly occurring sandy lenses and small channels.
12. The alluvial sediments in the vicinity of the landfill contain ground water in three zones: 1) the shallow zone from near ground surface to approximately 40 feet below grade (MSL); 2) an intermediate zone from approximately 70 to 80 feet below grade, and a deep aquifer extending to at least 150 to 200 feet below grade.
13. At this time, shallow groundwater quality is not monitored at the landfill. However, the shallow (10 - 30 feet below ground surface) and intermediate (40 - 70 feet below ground surface) zone aquifers upgradient of the landfill are monitored and contain volatile organic compounds (VOCs), primarily trichloroethene (TCE) and trans 1,2 dichloroethene (DCE). The plume of VOCs originates from Teledyne Semiconductor's and Spectra-Physics' facilities located about one mile south of the landfill and upgradient with respect to ground water.
14. Water quality in the deep aquifer does not appear to have been affected by the landfill.
15. The majority of the TCE plume described in Finding 13 is intercepted and thus partially contained by the 150-Acre Parcel refuse cell dewatering trench located approximately 30 feet below ground surface. Water, discharged from this drain system into Permanente Creek, contains TCE and other VOCs. It is possible that leachate from the landfill may also be present in the effluent from this dewatering system. On February 18, 1987 the Board adopted Order No. 87-12, an NPDES permit for the discharger, to regulate this discharge of groundwater from the landfill's dewatering system for the 150-Acre Parcel to Permanente Creek. The discharger has appealed this permit to the State Water Resources Control Board. This Order does not require operation of the dewatering system for landfill related purposes.
16. The beneficial use of the shallow groundwater (elevation MSL to approximately 40 below grade) found in the surficial alluvial deposits at and around the landfill is to recharge the surface waters of South San Francisco Bay and contiguous waters. The beneficial uses of South San Francisco Bay and contiguous waters are as follows:
  - a. Wildlife habitat
  - b. Water contact recreation
  - c. Non-contact water recreation
  - d. Commercial and sport fishing

- e. Preservation of rare and endangered species
- f. Estuarine habitat
- g. Fish migration and spawning

The present and potential beneficial uses of the deeper groundwater (below elevation 150 feet below MSL) are as follows:

- a. Domestic and municipal water supply
  - b. Industrial process water supply
  - c. Industrial service supply
  - d. Agricultural supply
17. Ground water wells within a mile of the site are located in all ground water zones and are primarily used for monitoring water quality.
  18. Article 5 of Subchapter 15 requires that the discharger institute a detection monitoring program designed to detect the presence of waste constituents in surface water or ground water outside of the waste management unit and in any unsaturated zone beneath and adjacent to the waste management unit.
  19. In order to satisfy requirements of Article 5 of Subchapter 15, the discharger has submitted a proposed ground water monitoring program.
  20. The discharger has not provided adequate data to determine or illustrate ground water occurrence or flow patterns at the landfill. Without additional information and detail on the site geology and hydrogeology, topography, cross sections delineating proposed monitoring wells and refuse cell drain systems, etc., it is not possible to determine the adequacy of the proposed monitoring program for requirements of Subchapter 15 or the Solid Waste Assessment Test report as required by Section 13273 of the California Water Code.
  21. The proposed monitoring program does not include adequate measures for determination of chemical characteristics of the waste in the landfill.
  22. Background groundwater quality for the landfill, for the purpose of establishing Water Quality Protection Standards (WQPS), pursuant to Section 2552 of Subchapter 15, have not been determined. Compliance with this Order will provide for the establishment of WQPS according to the requirements of Subchapter 15.
  23. Surface runoff from the site discharges into Permanente Creek and Stevens Creek, salt ponds along the northern boundary of the site, Coast Casey Forebay, Shoreline Lake, and the Mountain View Tidal Marsh.
  24. Waste is no longer placed at the 544-Acre Parcel. The 544-Acre Parcel was to be closed in accordance with Board adopted requirements, by July 1, 1983, as required by Order No. 78-11, as amended by Order No. 81-26. The discharger was to have submitted by August 15, 1983, a report prepared by a certified engineering geologist or registered engineer documenting that full compliance had been achieved according to the closure plan specifications. The discharger has not satisfactorily shown that the landfill was properly closed.

25. Because wastes have been placed at the 150-Acre Parcel and the Ferrari site below the elevation of the shallow ground water in fill cells excavated to depths of 24 to 50 feet below ground surface, the 150-Acre Parcel and the Ferrari site do not meet the geologic siting criteria for a Class III landfill as specified in Section 2530(c) of Subchapter 15. The 150-Acre Parcel and the Ferrari site are existing landfills and must be operated, according to Section 2530(c), to ensure that wastes will be a minimum of 5 feet above the highest anticipated elevation of the underlying groundwater.
26. Since it would be extremely costly to remove the wastes from the existing landfills for relocation, or to provide a five foot separation between the wastes and the shallow groundwater at the site, the discharger has applied for an exception to the siting requirement of Section 2530(c) pursuant to Section 2510(b) of Subchapter 15, for the 150-Acre Parcel and the Ferrari site.
27. Pursuant to Section 2510(b) of Subchapter 15, the discharger has proposed to prevent leachate migration from the landfill. The discharger will construct a leachate monitoring and collection system as an attempt to control and prevent the build-up of leachate within the existing fill area. The discharger will install leachate monitoring/extraction wells throughout the existing fill area to provide control and to prevent the build-up of leachate at the site. This system will be designed as a cost effective means to control leachate at the site, to prevent the migration of leachate into the groundwater, and to protect the beneficial uses of the waters of the State. Compliance with this Order will provide for an evaluation of the need for additional remedial action and any adverse impacts on the waters of the State.
28. The Board finds that it is infeasible to meet the siting requirements of Section 2530(c) of Subchapter 15 for the 150-Acre Parcel, and portions of the Ferrari site that have received waste, because it is economically infeasible to remove all the wastes already in place. The Board finds that compliance with the requirements of this Order will ensure the protection of the beneficial uses of the waters of the State.
29. The discharger proposes to excavate portions of the Ferrari site, where wastes have not yet been placed, to depths of 50 feet below grade for disposal of wastes. The proposed method of disposal would not provide for compliance with the siting criteria in Section 2530(c) of Subchapter 15 which requires that Class III landfills be sited, designed, constructed and operated to ensure that wastes will be a minimum of 5 feet above the highest anticipated elevation of underlying groundwater. The discharger has not provided a sufficiently detailed rationale, pursuant to Section 2510(b) of Subchapter 15, for an exception to the siting criteria to be considered for the unfilled portions of the Ferrari site. The Board may consider an exception to the siting criteria for the proposed method of disposal at the Ferrari site, providing the discharger has demonstrated pursuant to Section 2510(b) that it is infeasible to meet the siting criteria, and that there is a specific engineered alternative that meets the performance goal of the 5-foot separation.

30. The discharger has not provided a quality control/quality assurance program for construction of the final cover over the 150-Acre Parcel and the Ferrari site.
31. Section 2580(b) of Subchapter 15 requires that landfill closure be under the direct supervision of a registered civil engineer or a certified engineering geologist. The closure plan for the Mountain View Landfill, submitted in January of 1979, and amended by the Report of Waste Discharge (ROWD) submitted in December of 1986, does not include a statement to the effect that this will be the case.
32. Section 2580(d) of Subchapter 15 requires closed waste management units to have at least two permanent surveyed monuments from which the location and elevation of the wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period. The closure plan included with the ROWD does not provide for establishment of these monuments.
33. Section 2580(f) of Subchapter 15 requires the discharger to establish an irrevocable closure fund to ensure that closure and post-closure maintenance work will be completed. The closure plan failed to provide evidence of an irrevocable closure fund or other means to ensure closure and post-closure maintenance according to the closure plan.
34. The discharger has not provided an acceptable slope stability analysis that demonstrates, pursuant to Section 2595(f) of Subchapter 15, that the proposed slope design will be stable under static and pseudo-static conditions and that the design features of the landfill will not fail due to the maximum probable earthquake or because of liquefaction.
35. Section 2533(c) of Subchapter 15 requires that Class III landfills be designed, constructed, operated, and maintained to prevent inundation or wash-out due to floods with a 100-year return period. The discharger has not satisfactorily demonstrated that the site is protected from the 100-year flood, as data has not been presented to document that levees surrounding the site, and the Permanente and Stevens Creek channels, are adequately constructed for this purpose.
36. The discharger has not adequately shown that the site drainage system is designed to carry the 100-year rainfall flows from the site pursuant to Section 2595(e)(5) of Subchapter 15.
37. The Mountain View Landfill/Shoreline Regional Park will ultimately become largely dedicated to public recreational and open-space uses. The golf course area is currently irrigated, and portions of the 150-Acre Parcel and the Ferrari site will be irrigated. Section 2597(b) of Subchapter 15 requires that if the waste management unit is to be used for purposes other than nonirrigated open space during the post-closure maintenance period, the discharger shall submit a water balance on the site to determine potential adverse impacts due to the proposed use and corresponding mitigative design features that will ensure the physical and hydraulic integrity of the final cover. The discharger has not prepared a water balance for the site and has not proposed adequate mitigative design features to ensure protection of the final cover.

38. The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin on December 17, 1986 and this Order implements the water quality objectives stated in that plan.
39. This project constitutes a minor modification to land for the continued operation of an existing landfill, with changes to meet public health and safety standards, and is therefore categorically exempt from the provisions of the California Environmental Quality Control Act (CEQA) pursuant to Section 15301 of the Resources Agency Guidelines.
40. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge, and has provided them with an opportunity to submit their written views and recommendations.
41. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the City of Mountain View, and any other persons that currently or in the future own this land or operate this facility, shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and shall also comply with the following:

A. PROHIBITIONS

1. The disposal of waste shall not create a pollution or nuisance as defined in Section 13050(1) of the California Water Code.
2. Wastes shall not be placed in or allowed to contact ponded water from any source whatsoever.
3. Wastes shall not be disposed of in any position where they can be carried from the disposal site and discharged into waters of the State or of the United States.
4. Hazardous and designated wastes as defined in Sections 2521 and 2522 of Subchapter 15, and high moisture content wastes, with the exception of methane gas condensate generated at the site, but including sewage sludge, septic tank waste, cannery waste, restaurant grease, and wastes containing less than 50% solids, shall not be deposited or stored at this site.
5. The discharger, or any future owner or operator of this site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:
  - a. Surface Waters
    1. Floating, suspended, or deposited macroscopic particulate matter or foam.
    2. Bottom deposits or aquatic growth.
    3. Alteration of temperature, turbidity, or apparent color beyond natural background levels.

4. Visible, floating, suspended or deposited oil or other products of petroleum origin.
5. Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

b. Ground Water

1. The ground water shall not be degraded as a result of the waste disposal operations.
6. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or the United States.
7. Waste disposal operations at the Ferrari site shall only be allowed if refuse is placed in areas that are granted an exemption by this Order.

B. SPECIFICATIONS

1. Water used during disposal operations shall be limited to a minimal amount necessary for dust control and fire suppression.
2. The site shall be protected from any washout or erosion of wastes or covering material and from inundation which could occur as a result of a 100 year 24 hour precipitation event, or as the result of flooding with a return frequency of 100 years.
3. Surface drainage from tributary areas, and internal site drainage from surface and subsurface sources, shall not contact or percolate through wastes during disposal operations or during the life of the site. Earthen drainage ditches to be constructed over refuse fill will be underlain with a minimum 5-foot thickness of compacted earth fill. Surface drainage ditches shall be constructed to ensure that all rainwater is diverted off-site and does not contact wastes or leachate.
4. Leachate control and monitoring facilities shall be installed in the 150-Acre Parcel, portions of the Ferrari site that have received wastes at the time this Order is adopted, and if necessary, the 544-Acre Parcel. Measures shall be taken to assure that leachate collection sumps and extraction wells will remain operational permanently.
5. The leachate monitoring and control system for the 150-Acre Parcel and the filled portions of the Ferrari site shall be maintained and operated to prevent the excess build-up of hydraulic head on the bottom of the landfill. This system shall be inspected weekly, and any excess accumulated fluid shall be removed.

6. The discharger shall ensure that the foundation of the site, the levees surrounding the site, the refuse fill, the structures which control leachate, surface drainage, erosion, and gas for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.
7. The landfill shall be provided with interim cover. Interim cover at landfills is daily cover and intermediate cover as defined by the California Waste Management Board. Interim cover shall be designed and constructed to minimize percolation of precipitation through wastes.
8. The periodic load checking program, as outlined in the ROWD cited in Finding 31, shall be implemented to ensure that hazardous materials are not discharged at the landfill.
9. As portions of the landfill are closed, the exterior surfaces shall be graded to a minimum slope of three percent in order to promote lateral runoff of precipitation. In addition, all existing landfill areas shall be covered with a minimum of 4 feet of cover and meet other applicable requirements as described in Article 8 of Subchapter 15.
10. Pursuant to Section 2580(d) of Subchapter 15, the discharger shall provide two surveyed permanent monuments on or near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period. These monuments shall be installed by a licensed land surveyor or registered civil engineer.
11. The discharger shall demonstrate that funds available for closure and post-closure maintenance qualify as an irrevocable closure fund, pursuant to Section 2580(f) of Subchapter 15, and that it will provide sufficient funds to properly close each area of the landfill and for the post-closure monitoring and maintenance of the site. For the purposes of planning the amount of this fund the discharger shall assume a post-closure period of at least 30 years. The discharger shall provide an evaluation of closure and post closure monitoring and maintenance costs.
12. The discharger shall operate the waste management unit so as not to cause a statistically significant difference to exist between water quality at the compliance points and the WQPS to be established by compliance with this Order. The compliance points are identified as ground water monitoring wells to be installed along the perimeter of the landfill, and existing downgradient deep zone monitoring wells. The discharger shall establish WQPS according to the requirements of this Order and Article 5 of Subchapter 15. WQPS shall be established for, at a minimum, the following constituents:
  - a. pH
  - b. Specific Conductivity
  - c. Chloride
  - d. Total Organic Carbon

- e. Nitrate Nitrogen
  - f. Total Kjeldahl Nitrogen
  - g. Total Phenol
  - h. Total Dissolved Solids
  - i. Arsenic
  - j. Total Chromium
  - k. Copper
  - l. Nickel
  - m. Zinc
  - n. Lead
13. Because hydrogeology and ground water flow patterns at the site have not been adequately defined by the discharger, a detection monitoring program pursuant to Article 5 of Subchapter 15 has not been approved for the site. The discharger shall provide any additional information and data necessary for development of a ground water monitoring program pursuant to Article 5 of Subchapter 15.
14. The discharger shall install any additional ground water and leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger in order that the Board may evaluate compliance with the conditions of this Order.

C. PROVISIONS

1. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order immediately upon adoption of this Order. The discharger shall construct and operate the landfill in accordance with the design plans cited in Finding 31 of this Order, as modified by requirements of this Order.
2. The discharger shall submit a slope stability analysis by January 1, 1989 that evaluates the stability of the design slopes under static and pseudo-static loading conditions. This report shall address the potential for liquefaction at the site and the effect that liquefaction would have on the design features of the landfill. If this stability analysis finds that the design of the landfill is not adequate for any reason, this report shall include an amended design, acceptable to the Executive Officer, that provides a new design assuring slope stability.
3. The discharger shall submit a report by September 1, 1988 documenting compliance with Specifications B.2 and B.3 of this Order. This report shall include calculated runoff volumes, patterns, and peak stream discharges for the 100-year storm; current survey data to verify elevation contours shown on the topographic map provided as Figure 5-3 of the ROWD cited in Finding 31 of this Order; documentation that the site is protected from any washout or erosion of wastes or covering material and from inundation which could occur as a result of the 100 year, 24 hour precipitation event, or as the result of flooding with a return frequency of 100 years; the 100-year stream flow calculations for Permanente and Stevens Creek and documentation that the stream channels are capable

of carrying this flow; documentation that levees surrounding the site have been constructed to protect the landfill during the probable 100-year high tide.

4. The discharger shall submit, by March 18, 1988, an amended exemption request from Section 2530(c) pursuant to Section 2510 of Subchapter 15, for unfilled portions of the Ferrari site. This request shall fully address economic and technical considerations, including, but not limited to, present and projected costs of compliance, potential costs for remedial action in the event that waste or leachate is released to the environment, and the extent of groundwater resources which could be affected. The exemption request shall discuss the rationale for proposing to excavate to a depth of 50 feet below grade, a deviation from the original design plans for the Ferrari site, which specify excavation to 25 feet below grade.
5. The discharger shall submit, by April 1, 1988, a report, including a proposal for corrective action, for the portion of the Ferrari site filled to a depth of 50 feet below grade. This report shall include a discussion regarding the rationale for having excavated 25 feet below the depth specified in design plans for the site, a report titled, "Geotechnical Investigation and Waste Management Studies, Proposed Class II-2 Disposal Site, Stierlin Road, Mountain View, California, for Ferrari Brothers", dated December 5, 1972. This report shall also include detailed design and as-built construction plans for the filled area. Proposed corrective action alternatives shall include, at a minimum, the following: (1) evaluation of the cost and feasibility of removing the waste; and (2) leachate control and groundwater monitoring facilities above and beyond that used in other areas of the Ferrari site and the 150-Acre Parcel. The proposal for leachate control shall explore and assess, in addition to leachate wells within the fill area, other available options.
6. The discharger shall submit, by August 1, 1988, a report documenting that the 544-Acre Parcel has been closed in accordance with the report titled "Shoreline Regional Park - Site Closure Plan", dated January 30, 1981. This report shall include field data to document the thickness and permeability of the final cover.
7. The discharger shall submit, by May 1, 1988, proposed locations, construction specifications and sampling protocol for leachate wells to be installed in the 150-Acre Parcel and the Ferrari site. This submittal shall include an evaluation of the existing leachate risers in the 544-Acre Parcel and a proposal for installation of additional leachate wells if deemed necessary. This submittal shall also include a time schedule for installation and sampling of the leachate wells.
8. The discharger shall submit, by March 1, 1988 a report providing a detailed hydrogeological assessment of the subsurface stratigraphy at the landfill. This report shall include data from a program that includes installation of soil borings in numbers and locations sufficient to accurately portray stratigraphy beneath the site. This report shall include a detailed time schedule for

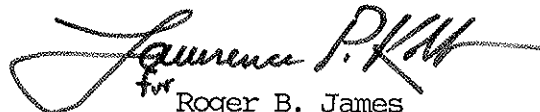
installation and sampling of new groundwater monitoring wells, and a revised sampling and analysis plan.

9. The discharger shall submit, by July 1, 1988 a report which details assessment of data acquired through implementation of a revised groundwater monitoring program designed and implemented based on the detailed subsurface investigation as described in Provision 8.
10. The discharger shall submit, by October 1, 1988, an evaluation of leachate build-up within all portions of the landfill, and a proposed leachate management plan. This plan should evaluate the quantity of leachate produced, the storage of the leachate, and the proposed disposal of the leachate. This management plan should also provide for an annual evaluation of the leachate generated at the site. If recirculation of the leachate is to be considered, the discharger must demonstrate that the quantity of leachate being recirculated will not exceed a solid to liquid ratio of at least 5:1 using a moisture content of the solid waste of at least 30%. The leachate management plan shall satisfy Section 2510 for exemption from Section 2530(c) of Subchapter 15 and be subject to approval by the Executive Officer.
11. The discharger shall submit, within one year after establishment of a revised water quality monitoring program, a report on the groundwater quality at the site that proposes Water Quality Protection Standards for the constituents listed in Specification B.13 of this Order according to the requirements of Article 5 of Subchapter 15. If it is determined that the statistical comparison requirements of Article 5 are infeasible the report should include a proposal, pursuant to Section 2510(b) of Subchapter 15, for an alternative comparison procedure.
12. The discharger shall submit, within 90 days after the closure of the 150-Acre Parcel, a closure certification report that documents that the area has been closed according to the requirements of this Order and Subchapter 15. Such a report shall also be submitted within 90 days after the closure of the Ferrari site.
13. The discharger shall submit, by July 1, 1988, a revised closure plan for the 150-Acre Parcel and the Ferrari site which will include, at a minimum, the following:
  - a. a quality assurance/quality control program for construction of the final cover;
  - b. proposed final grades;
  - c. documentation of compliance with Specification B.10, B.11, and B.12, or a time schedule for achieving compliance;
  - d. a water balance of the landfill to determine potential adverse impacts due to the proposed use, and corresponding mitigative design features that will ensure the physical and hydraulic integrity of the final cover;

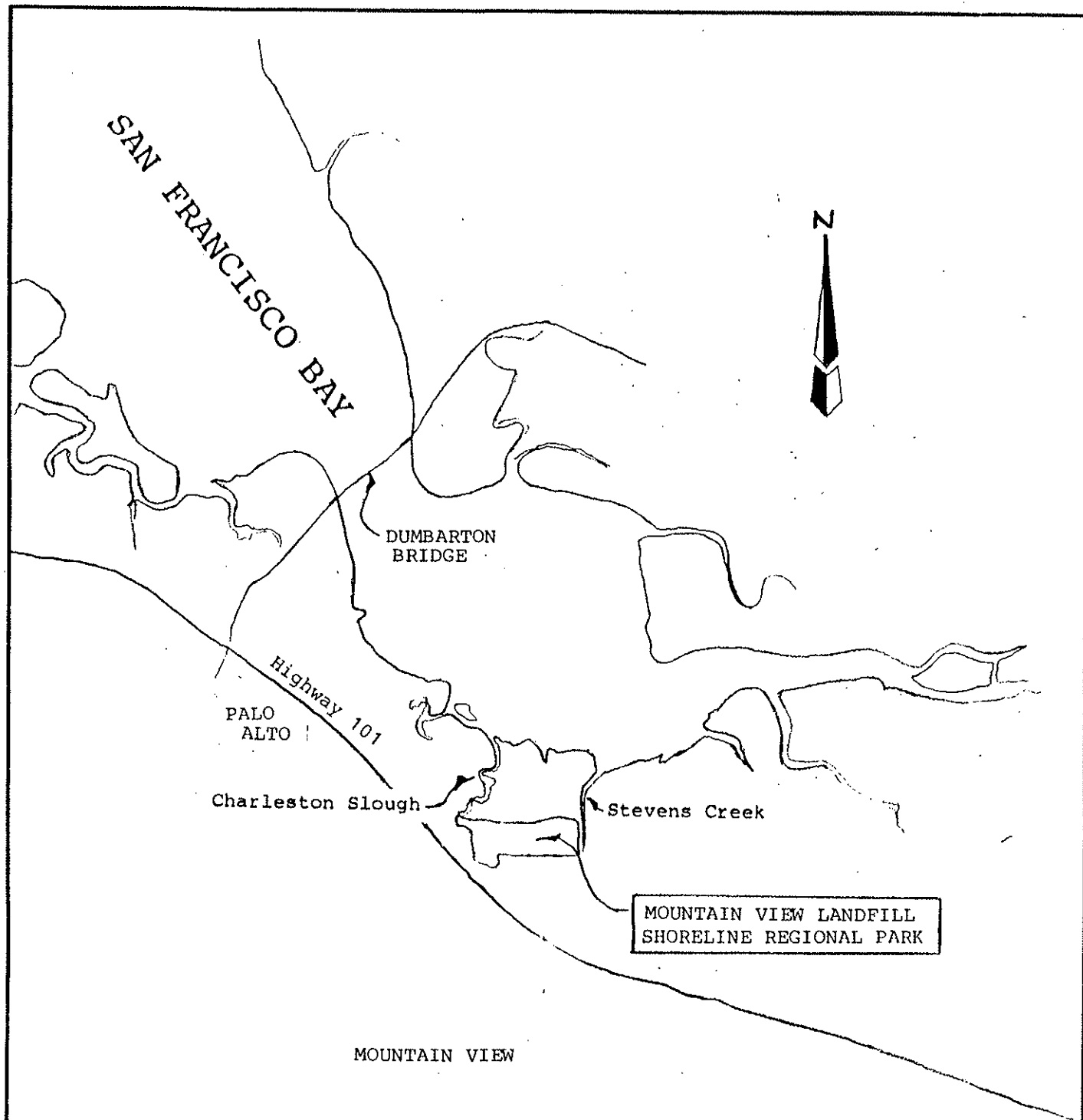
- e. a detailed time schedule for closure of all portions of the landfill.
- 14. Because the 150-Acre Parcel dewatering system described in Finding 15 serves to contain contaminants from the Teledyne and Spectra-Physics plume and may contain leachate from the landfill, any phase out or discontinuance of operation of the dewatering system should be coordinated with Teledyne's and Spectra-Physics' implementation of their off-site extraction system. If the discharger intends to phase out or discontinue operation of this dewatering system, the discharger shall submit a technical report, pursuant to Section 13225(c) of the California Water Code, satisfactory to the Executive Officer at least 60 days prior to such phase out or discontinuance. This report shall describe efforts made by the discharger to coordinate the operation of the system with Teledyne and Spectra-Physics.
- 15. The discharger shall file with the Regional Board quarterly self-monitoring reports performed according to any self-monitoring program issued by the Executive Officer.
- 16. All reports prepared pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.
- 17. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
- 18. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal areas or the ownership of the site.
- 19. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.
- 20. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations.
- 21. The discharger shall maintain all devices or designed features installed in accordance with this Order such that they continue to operate as intended without interruption except as a result of failures which could not have been reasonably foreseen or prevented by the discharger.
- 22. The discharger shall permit the Regional Board or its authorized representative, upon presentation of credentials:
  - a. Entry upon the premises on which wastes are located or in which any required records are kept.

- b. Access to copy any records required to be kept under the terms and conditions of this Order.
  - c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.
  - d. Sampling of any discharge or ground water covered by this Order.
23. This Board's Order Nos. 78-11, 81-26 and 73-51 are hereby rescinded.
24. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.
25. This Order is subject to Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the Regional Board Basin Plan; or changes in the discharge characteristics, in five year increments from the effective date of this Order.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on February 17, 1988.

  
for Roger B. James  
Executive Officer

Attachments: A) Site map  
B) Self Monitoring Program



ATTACHMENT A

STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

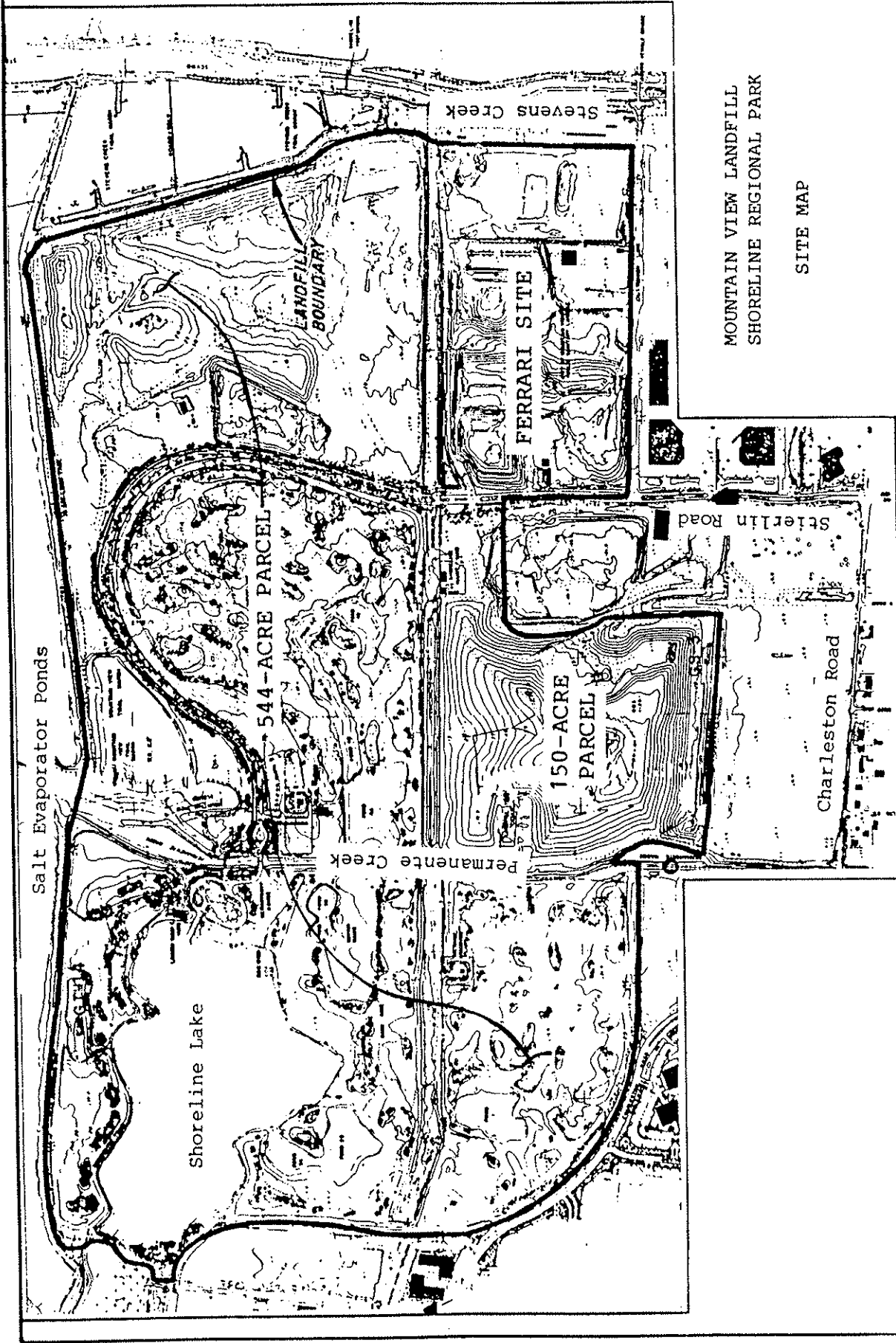
MOUNTAIN VIEW LANDFILL  
SHORELINE REGIONAL PARK

SITE LOCATION MAP

DRAWN BY:

DATE:

DRWG. NO.



MOUNTAIN VIEW LANDFILL  
SHORELINE REGIONAL PARK

SITE MAP

0 1000 2000 Feet

ATTACHMENT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CITY OF MOUNTAIN VIEW

MOUNTAIN VIEW LANDFILL

MOUNTAIN VIEW, SANTA CLARA COUNTY

ORDER NO. 87-027

CONSISTS OF

PART A

AND

PART B

## PART A

### A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Self-Monitoring Program is issued in accordance with Section C.15 of Regional Board Order No. 87-027.

The principal purposes of a self-monitoring program by a waste discharger are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

### B. SAMPLING AND ANALYTICAL METHODS

#### Sampling

Sample collection, storage, and analyses shall be performed according to most recent version of Standard Methods for the Analysis of Wastewater and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

### C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.
2. A composite sample is a sample composed of individual grab samples mixed in proportions varying not more than plus or minus five percent from the instantaneous rate of waste flow corresponding to each grab sample collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the period of discharge or 24 consecutive hours, whichever is shorter.
3. Receiving waters refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill, the surface runoff from the site, the drainage ditches surrounding the site, Permanente Creek, Stevens Creek, Coast Casey Forebay, Mountain View Tidal Marsh, and adjacent salt evaporator ponds are considered the receiving waters.

4. Standard observations refer to:

a. Receiving Waters

- 1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area.
- 2) Discoloration and turbidity: description of color, source, and size of affected area.
- 3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
- 4) Evidence of beneficial use: presence of water associated wildlife
- 5) Flow rate.
- 6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

b. Perimeter of the waste management unit.

- 1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)
- 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
- 3) Evidence of erosion and/or daylighted refuse.

c. The waste management unit.

- 1) Evidence of ponded water at any point on the waste management facility.
- 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
- 3) Evidence of erosion and/or daylighted refuse.
- 4) Standard analysis and measurements refer to:

- a. pH
- b. Electrical Conductivity (EC)
- c. Total Dissolved Solids (TDS)
- d. Total Phenols
- e. Chloride
- f. Total Organic Carbon
- g. Nitrate Nitrogen
- h. Total Kjeldahl Nitrogen
- i. Water elevation in feet above Mean Sea Level
- j. Settleable Solids, ml/l/hr

- k. Turbidity, NTU
- l. EPA Method 601, identifying all peaks greater than 1 microgram/liter.

#### D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Article 5 of Subchapter 15.

#### E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.
2. Date and time of sampling.
3. Date and time that analyses are started and completed, and name of the personnel performing the analyses.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory.
5. Calculation of results.
6. Results of analyses, and detection limits for each analyses.

#### F. REPORTS TO BE FILED WITH THE BOARD

1. Written self-monitoring reports shall be filed by the 15th day of the month following the report period. In addition an annual report shall be filed as indicated in F.2. The reports shall be comprised of the following:

##### a. Letter of Transmittal

A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and

the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

- b. Each monitoring report shall include a compliance evaluation summary sheet. This sheet shall contain:
  - 1) The sample mean and the sample variance for all sample sets taken from all compliance points, and shall determine if the difference between the mean of each sample set and the water quality protection standard is significant at the 0.05 level using Cochran's Approximation to the Behrens-Fisher Student's t-test as described in Appendix II of Subchapter 15. The discharger may propose an alternative statistical procedure to be used in making this determination pursuant to Section 2555(h)(3) of Subchapter 15. If a statistically significant difference is found this shall be reported as a suspected requirement violation in the letter of transmittal.
  - 2) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations.
  - 3) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.
  - 4) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations; the chain of custody record.
- c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.
- d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.
  - 1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods

of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review.

- 2) In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.
- e. An evaluation of the effectiveness of the leachate monitoring/control facilities.
- f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.
- g. The quantity and types of wastes disposed of during the past quarter, and the locations of the disposal operations.

## 2. CONTINGENCY REPORTING

- A. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within five days. This report shall contain the following information:
  - 1) a map showing the location(s) of discharge;
  - 2) approximate flow rate;
  - 3) nature of effects; i.e. all pertinent observations and analyses; and
  - 4) corrective measures underway or proposed.
- B. A report shall be made in writing to the Board within seven days if a statistically significant difference is found between a self-monitoring sample set and a WQPS. Notification shall indicate what WQPS(s) have been exceeded. The discharger shall immediately resample at the compliance point(s) where this difference has been found and analyze another sample set of at least four portions split in the laboratory from the source sample.
- C. If resampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger must submit to the Board within 90 days an amended Report of Waste Discharge for establishment of a verification monitoring program meeting the requirements of Section 2557 of Subchapter 15. This submittal shall include the information required in Section 2556(b)(2) of Subchapter 15.

- D. The discharger must notify the Board within seven days if the verification monitoring program finds a statistically significant difference between samples from the verification monitoring program point of compliance and the WQPS(s).
  - E. If such a difference or differences are found by the verification monitoring program, it will be concluded that the discharger is out of compliance with this Order. In this event the discharger shall submit within 180 days an amended Report of Waste Discharge requesting authorization to establish a corrective action program meeting the requirements of Section 2558 of Subchapter 15. This submittal shall include the information required in Section 2557(g)(3) of Subchapter 15.
3. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:
- a. Tabular and graphical summaries of the monitoring data obtained during the previous year.
  - b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.
  - c. A map showing the area, if any, in which filling has been completed during the previous calendar year.
  - d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.
  - e. An evaluation of the effectiveness of the leachate monitoring/control facilities.
4. A boring log shall be submitted for each sampling and leachate monitoring well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

## Part B

### 1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

#### A. WASTE MONITORING

1. Record the total volume and weight of refuse in cubic yards and tons disposed at the site during the month. Report this information quarterly.
2. Record the volume of fill completed, in cubic yards, showing locations and dimensions on a sketch or map. Report this information quarterly.

#### B. ON-SITE OBSERVATIONS

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-'n'	Located on the waste disposal area as delineated by a 500 foot grid network.	Standard observations for the waste management unit.	Weekly
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the perimeter.	Weekly

#### C. GROUND WATER MONITORING

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
G-1 thru "G-n"	Ground water monitoring wells, as shown on the attached site map, including wells to be installed.	Standard analysis other than "j".	Once per quarter.

D. LEACHATE MONITORING

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
GR-1 thru "GR-n"	Leachate control facilities, as shown on the attached site map, including sumps and wells to be installed	Depth of leachate built up at base of land-fill, and volume removed. Elevation of leachate above Mean Sea Level.	Once each week and at time of removal.

E. SEEPAGE MONITORING


STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
S-1 thru S-'n' (seepage)	At any point(s) at which seepage is found occurring from the waste management unit.	Standard observations for the perimeter, and standard analysis other than "i".	Daily until remedial action is taken and seepage ceases.
E-001 (receiving waters, upstream)	Located in receiving waters 200 feet upstream from the upper-most point of seepage discharge(s).	Standard observation for receiving waters and standard analysis other than "i".	Daily, during a seepage event.
E-002 (receiving waters, downstream)	Located in receiving waters 200 feet downstream of seepage discharge(s).	Same as receiving waters upstream.	Daily during a seepage event.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 87-027.

2. Is effective on the date shown below.
3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

2/19/88  
Date Ordered

  
for  
Roger B. James  
Executive Officer



# EXPLANATION

MONITORING STATIONS:

SHALLOW WELL

DEEP WELL

METHANE GAS PROBE



STATIONS  
LOCATED  
~1/4 MILE  
NORTH  
(GD-1 and GD-1)

SLOUGH

VIEW  
MOUNTAIN

CHARLESTON  
SLOUGH

LANDFILL BOUNDARY

NOTE: GD-3A DESTROYED

GD-6

GD-5A  
G-7A  
MG-1A

GD-A  
MG-5

GD-4

GD-3A

MG-2

MG-3

GD-2A

GD-5

FREEWAY

ROAD

INDEPENDENCE AVE

CHARLESTON ROAD

MIDDLEFIELD

SAN ANTONIO

BAYSHORE

Adobe Ck.

Stevens Ck.

25'

25'

GROUND WATER MONITORING  
STATION LOCATIONS

1 Mile

1/2

0

+

